

REMARKS

Formal Matters

Claims 1-24 are pending.

Claims 1-12 were examined. Claims 1-12 were rejected.

Claims 13-24 are new. Support for these claims is found in the claims as originally filed, and throughout the specification, in particular at the following exemplary locations: page 7 lines 27-page 8 line 20, and page 7 lines 6-25.

Accordingly, no new matter is added.

Applicants respectfully request reconsideration of the application in view of the remarks made herein.

Allowable subject matter

The Applicants gratefully acknowledge the Examiner's indication that the subject matter of claim 12 is allowable.

Rejection of claims under 35 U.S.C. § 112-first paragraph

Claims 1-2 are rejected under 35 U.S.C. § 112, first paragraph, as encompassing subject matter that is not adequately enabled by the specification. Specifically, the Office Action asserts that the claims are *single means* claims, and not a combination of elements. The Applicants respectfully traverse this rejection.

With respect to single means claims, the MPEP at § 2164.08(a) states the following "A single means claim, i.e., where a means recitation does not appear in combination with another recited element of means, is subject to an undue breadth rejection under 35 U.S.C. 112, first paragraph."

As set forth in MPEP § 2181, "means" limitations solely recite a property that does not impart any structural feature on the claimed subject matter. Means limitations usually recite the word "means".

The Applicants respectfully submit that claims 1-2 do not contain means limitations, and, as such, are not single means claims.

Claim 1 recites "An ionization chamber for an ion source, said ionization chamber comprising an inert super alloy".

Claim 1 does not recite the word "means". Further, Claim 1 does not solely rely on a recited property: structural limitations are provided by the phrase "ionization chamber", which is a well known term in the art that is explicitly defined in the specification to mean "a solid structure that substantially encloses a volume in which the sample, typically a gas, is ionized. The solid structure may also constitute part of a mass analyzer; for example, an ion trap wherein electron impact or chemical ionization occurs inside the trap." Further, claim 1 recites an "inert super alloy", adding a further structural limitation to the claim.

In view of the foregoing discussion, the Applicants respectfully submit that claim 1 recites a structural limitation: an ionization chamber. Accordingly, claim 1 cannot be a "single means claim". Claim 2, because it is dependent on claim 1, too, cannot be single means claim.

Furthermore, the Office Action indicates that a combination of elements is required to satisfy the enablement requirement of 35 U.S.C. § 112, first paragraph. The Applicants note that that, according to the MPEP (as cited above), a combination of elements is required to satisfy the enablement requirement of 35 U.S.C. § 112, first paragraph, *only if a means limitation is present in the claim*. The Applicants have reviewed the MPEP and have found no requirement that a combination of elements is statutorily required to satisfy the enablement requirement of 35 U.S.C. § 112. According to the law, therefore, a single element, as long as it is not a "means" limitation, is sufficient.

As such, the Applicants respectfully submit that there is no requirement under 35 U.S.C. § 112 for a combination of elements in a claim, unless the claim solely consists of a "means" limitation. Accordingly, since claim 1 does not recite any means limitation, there is no requirement for a combination of elements in claim 1 and this rejection may be withdrawn.

Finally, the new claims recite various limitations such as a "ionization chamber", "mass spectrometer", and "mass analyzer", and the like. The Applicants

respectfully submit that the new claims are not single means claims for the same reasons that claims 1-2 are not single means claims, i.e., they recite structural limitations.

In view of the foregoing discussion, the Applicants earnestly request the Examiner to withdraw this rejection

Rejection of claims under 35 U.S.C. § 103

Claims 1-11 are rejected under 35 U.S.C. § 103 as being unpatentable over Mantkowski (5,075,966). Specifically, the Office asserts that Mantkowski discloses a rocket engine containing a component that can be made of a super alloy, that renders the rejected claims obvious. The Applicants respectfully traverse this rejection.

According to MPEP § 2131.01(a), a reference used in a rejection under 35 U.S.C. § 103 must be analogous prior art. Quoting from the MPEP, "the reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned." In other words, if a reference is not reasonably pertinent to the applicant's field of endeavor, it cannot be used in a rejection of claims under 35 U.S.C. § 103.

The Applicants respectfully submit that rocket engines are not reasonably pertinent to the Applicants' own field of endeavor, i.e., ionization chambers for mass spectrometers. The Office argues that the combustion chamber of the cited rocket engine contains ions and accordingly can be thought of as a type of ionization chamber. However, the Applicants respectfully submit that rocket engines are so far removed from the Applicants' own field of endeavor, i.e., ionization chambers for mass spectrometry, they cannot represent analogous art.

The Applicants respectfully submit that this argument, alone, is sufficient to merit the withdrawal of this rejection, which action is respectfully requested.

If the foregoing discussion fails to remove this rejection, the Applicants further submit that the Office has failed to establish a *prima facie* case of

obviousness because the cited art fails to teach all of the claimed elements and fails to suggest the claimed invention.

The Applicants note that claims 3, 8-11, and many of the new claims recite elements other than "an ionization chamber".

For example, claim 3 recites "a system for analyzing a sample", claim 8 recites a coated inner surface "for reduced interaction with reactive samples", claim 10 recites "a system for analyzing a sample", claim 11 recites "a method of reducing interaction of a reactive sample with a surface of an ion source", claims 13 and 14 recite a "mass spectrometer" and claim 16 recites a method for "analyzing a sample" and a "mass analyzer".

The Applicants respectfully submit that none of these elements are disclosed, taught, or fairly suggested by Mantkowski or otherwise provided in the reasoning set forth in the Office Action.

As such, the Applicants respectfully submit that the Office has failed to establish a *prima facie* case of obviousness since Mantkowski fails to provide any of the above elements.

As such, even if the Examiner could argue that Mantkowski is analogous art, this rejection should still be withdrawn because the rejection fails to teach all of the elements of the claimed invention.

Finally, even if the Office did set forth a rejection in which all of the elements of 3, 8-11 and 13-16 were provided, the Office has still not established a *prima facie* case of obviousness because the Office Action has failed to provide any motivation to use a super alloy in an ionization chamber that meets the limitations of claims 3, 8-11 and 13-15.

Mantkowski provides no suggestion to use a super alloy in an ionization chamber for analyzing samples. In fact, Mantkowski fails to provide any indication of the advantages of super alloy for reactive analytes, and fails to teach that super alloys are inert to reactive samples. Mantkowski merely acknowledges, in column

5, lines 15-16, that super alloys are heat resistant, not reactive sample resistant.

In other words, in addition to failing to suggest the use of super alloys in ionization chambers, Mantkowski fails to recognize a property of super alloys that makes them suitable for the subject invention: inertness to reactive analytes. As such, in view of Mantkowski's disclosure, a skilled researcher would find no motivation to combine Mantkowski's super alloys into a ionization chamber for sample analysis.

Accordingly, even if the Office could reason that Mantkowski is analogous art and all the elements of the claims were provided in this rejection, the Office has still not established a *prima facie* case of rejection because it has failed to set forth any motivation to combine Mantkowski's super alloy into a ionization chamber, as claimed.

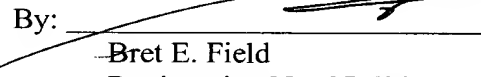
In view of the foregoing discussion, the Applicants respectfully urge the Examiner to withdraw this rejection and allow all the claims.

CONCLUSION

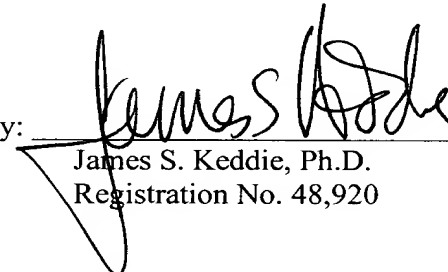
The Applicants respectfully submit that all of the claims are in condition for allowance, which action is requested. If the Examiner finds that a telephone conference would expedite the prosecution of this application, please telephone Timothy Joyce at 650 485 4310. The Commissioner is hereby authorized to charge any fees under 37 C.F.R. §§ 1.16 and 1.17 which may be required by this paper, or to credit any overpayment, to Deposit Account No. 50-1078.

Respectfully submitted,

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